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Michael J Mallie
Blakely Sokoloff Taylor & Zafman LLP
12400 Wilshire Boulevard 7th Floor
Los Angeles, CA 90025

EXAMINER

MATTIS, JASON E

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/710,442

Applicant(s)

KRAUTKREMER ET AL.

Examiner

Jason E Mattis

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/10/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-84 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of the following informalities. Page 23 lines 16-19 of the specification incorrectly labels "management control 505", "embedded database 504", and "user interface 506". These item numbers are inconsistent with the numbers given to these elements in Figure 5. The items should correctly be labeled "management control 506", "embedded database 505", and "user interface 507". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 79, 83, and 84 are rejected under 35 U.S.C. 102(e) as being anticipated by Pruthi et al. (U.S. Application 09/863593).

With respect to claim 1, Pruthi et al. discloses a method of monitoring performance of a network application at a demarcation point in a network **(See page 2 paragraphs 31-33 and item 102 in Figure 1 of Pruthi et al. for reference to a network monitor 102 monitoring data communications on the application layer at a point between two networks, N1 and N2, and providing real time metrics or statistics)**. Pruthi et al. also discloses determining a location, with respect to the demarcation point, of a performance problem associated with the network application **(See page 6 paragraph 67 of Pruthi et al. for reference to using the network monitor 102 to determine where, with respect to the monitor, "troubled" servers are located in a network)**.

With respect to claim 31, Pruthi et al. discloses providing a demarcation point with respect to a network application provided by a provider in a network **(See page 2 paragraphs 31-33 and item 102 in Figure 1 of Pruthi et al. for reference to providing a demarcation point with respect to a network application, between networks N1 and N2)**. Pruthi et al. also discloses employing a service-level agreement between the provider of the network application and a customer with responsibility for management of performance problems associated with the network application based on the demarcation point **(See page 2 paragraphs 14-15 of Pruthi et al. for reference to the network application monitoring system and method of Pruthi et al. being used by a company charged with monitoring a network, which implies that there must be some service-level agreement between the customer and the company to monitor the network application)**.

With respect to claim 33, Pruthi et al. discloses a network device, network monitor 102, collecting data, metrics or statistics, related to the operation of a network application at a demarcation point in a network on behalf of a provider (**See page 2 paragraphs 31-33 and item 102 in Figure 1 of Pruthi et al. for reference to a network monitor 102 monitoring data communications on the application layer at a point between two networks, N1 and N2, and providing real time metrics or statistics**). Pruthi et al. also discloses using the data, metrics or statistics, collected to determine whether a problem associated with the operation of a network application is a responsibility of the provider (**See page 6 paragraph 67 of Pruthi et al. for reference to using the statistics compiled by network monitor 102 to determine where, “troubled” servers, which are causing a problem, are located in a network, meaning the provider can determine if the troubled server is the provider’s responsibility**).

With respect to claim 39, Pruthi et al. discloses a network device, network monitor 102, for use at a demarcation point in a network (**See page 2 paragraphs 31-33 and item 102 in Figure 1 of Pruthi et al. for reference to a network monitor 102 monitoring data communications on the application layer at a point between two networks, N1 and N2, and providing real time metrics or statistics**). Pruthi et al. also discloses a measurement engine, processor and query engine 316, to take measurements (**See page 3 paragraph 34 and item 316 in Figure 3 of Pruthi et al. for reference to processor and query engine 316 processing data packets to take measurements of statistics**). Pruthi et al. further discloses generating a measurement

value, statistic, in response to information regarding delays (**See page 2 paragraph 33 of Pruthi et al. for reference to statistics including one-way or roundtrip delays**).

Pruthi et al. also discloses a memory 318 coupled to the management engine (**See page 3 paragraph 34 and item 318 in Figure 1 of Pruthi et al. for reference to memory 318 coupled to processor and query engine 316**). Pruthi et al. further discloses a storing the information indicative of delays, including the measurement value in the memory 318 (**See page 3 paragraph 36 of Pruthi et al. for reference to storing statistics, which include one-way or roundtrip delay statistics, in memory 318**). Pruthi et al. also discloses management control, user interface 324, coupled to the memory 318 through the processor and query engine 318, to access information indicative of the delays occurring in the network and to determine if a problem exists in the network that is a responsibility of a service provider (**See page 3 paragraphs 34 and 37 and Figure 3 of Pruthi et al. for reference to a user interface 324 coupled to the memory 318 to provide statistics to a display device, which a provider may use to view the statistics and determine if problems exist**).

With respect to claim 71, Pruthi et al. discloses a network device, network monitor 102 for use in a network at a demarcation point (**See page 2 paragraphs 31-33 and item 102 in Figure 1 of Pruthi et al. for reference to a network monitor 102 monitoring data communications on the application layer at a point between two networks, N1 and N2, and providing real time metrics or statistics**). Pruthi et al. also discloses a measurement engine, processor and query engine 316, to take measurements (**See page 3 paragraph 34 and item 316 in Figure 3 of Pruthi et al.**

for reference to processor and query engine 316 processing data packets to take measurements of statistics). Pruthi et al. further discloses generating a measurement value, statistic, in response to information regarding delays (**See page 2 paragraph 33 of Pruthi et al. for reference to statistics including one-way or roundtrip delays).** Pruthi et al. also discloses a memory 318 coupled to the management engine (**See page 3 paragraph 34 and item 318 in Figure 1 of Pruthi et al. for reference to memory 318 coupled to processor and query engine 316).** Pruthi et al. further discloses a storing the information indicative of delays, including the measurement value in the memory 318 (**See page 3 paragraph 36 of Pruthi et al. for reference to storing statistics, which include one-way or roundtrip delay statistics, in memory 318).** Pruthi et al. also discloses management control, user interface 324, coupled to the memory 318 through the processor and query engine 318, to access information indicative of the delays occurring in the network and to determine if a problem exists in the network that is a responsibility of a service provider (**See page 3 paragraphs 34 and 37 and Figure 3 of Pruthi et al. for reference to a user interface 324 coupled to the memory 318 to provide statistics to a display device, which a provider may use to view the statistics and determine if problems exist).** Pruthi et al. further discloses a service provider communicatively coupled to the network device, through a host computer via the network, where the provider and management control of the network device communication with each other regarding a problem associated with the operation of the network application (**See page 7 paragraph 82 of Pruthi et al. for**

reference to a host computer of a service provider coupled to and communicating with an interface computer, which embodies the monitor).

With respect to claims 2, 3, and 34, Pruthi et al. discloses mediating, by using data collected at the demarcation point to correct an identified problem in the network, between infrastructure of the network managed by the source provider and customer-managed infrastructure of the network, networks N1 and N2 which are disclose to be either LANs, WANs, or the Internet (See page 1 paragraph 3 and page 5 paragraph 53 of Pruthi et al. for reference to the networks used in the monitoring system of Pruthi et al. being either LANs, WANs, or the Internet and for reference to using statistics generated by the network monitor to mediate between the networks by dynamically routing of communications and providing bandwidth management responsive to statistics corresponding to network performance).

With respect to claims 4 and 43, Pruthi et al. discloses measuring end-to-end performance of the network with respect to the network (See page 2 paragraph 33 of Pruthi et al. for reference to monitoring the application layer for statistics that include roundtrip delays, meaning the end-to-end network performance is monitored).

With respect to claims 5 and 44, Pruthi et al. discloses measuring quantitative performance of the network application (See page 2 paragraph 33 of Pruthi et al. for reference to measuring quantitative performance through statistics such as byte counts, bit counts, one-way or roundtrip delays, response times, retransmitted bytes, originating bytes per host, terminating bytes per host, originating-

terminating host pair counts, web abort rates, throughput, goodput, and percent retransmitted bytes).

With respect to claims 6 and 45, Pruthi et al. discloses measuring congestion (See page 2 paragraph 33 of Pruthi et al. for reference to one-way and roundtrip delays which are an indication of congestion of the network application).

With respect to claims 7 and 46, Pruthi et al. discloses including identifying a class of traffic being affected (See page 3 paragraph 37 of Pruthi et al. for reference to determining the types of packets and filtering packets based on their types before processing the packets to gain performance statistics).

With respect to claims 8 and 47, Pruthi et al. discloses measuring network availability (See page 6 paragraph 66 of Pruthi et al. for reference to identifying “troubled servers” which are servers that are negatively impacting network availability).

With respect to claims 9 and 48, Pruthi et al. discloses the performance problem being monitored comprising discarding packets (See page 2 paragraph 33 of Pruthi et al. for reference to measuring percent retransmitted bytes, where bytes are retransmitted due to bytes being lost or discarded).

With respect to claims 10 and 49, Pruthi et al. discloses the performance problem that is being monitored comprising retransmission that slows overall response time (See page 2 paragraph 33 of Pruthi et al. for reference to measuring percent retransmitted bytes, which inherently slow overall response time because the bytes have to be sent more than once).

With respect to claims 11 and 50, Pruthi et al. discloses comparing congestion index values over time (See page 2 paragraphs 31-33 page 5 paragraph 53 of Pruthi et al. for reference to measuring one-way delays as a real-time statistics and using the one-way delay statistics over time for dynamic routing).

With respect to claims 12, 18, 51, and 57, Pruthi et al. discloses the management control, user interface 324, identifying the problem based on the ratio of the congestion index, one-way delay statistic, on a provider-controlled portion of the network versus the congestion index, one-way delay statistic, on a customer-controlled portion of the network being different (See page 5 paragraphs 53-54 of Pruthi et al. for reference to identifying asymmetries in a network based on the one-way delay statistic, meaning the asymmetries are based on differences in the one-way delay statistics on either side of the network monitor).

With respect to claims 13, 19, 52, and 58, Pruthi et al. discloses the management control, user interface 324, identifying the problem based on a change in a ratio of the congestion index, one-way delay statistic, on a provider-controlled portion of the network versus the congestion index on a customer-controlled portion of the network being different (See page 5 paragraphs 53-54 of Pruthi et al. for reference to identifying asymmetries in a network based on the one-way delay statistic over time, meaning the asymmetries are based on changes in one-way delay statistic being different on either side of the network monitor, which means the change in the ratio of the one-way delay statistics on either side of the monitor is also different).

With respect to claims 14, 20, 53, and 59, Pruthi et al. discloses the management control, user interface 324, identifying the problem based on a same amount of change occurring in the congestion index values on a provider-controlled portion of the network and a customer-controlled portion of the network (See page 5 paragraphs 53-54 of Pruthi et al. for reference to identifying asymmetries in a network based on the one-way delay statistic, meaning when there is no asymmetry between the changes of the one-way delay statistic on either side of the network monitor, the change in the one-way delay statistic on both sides of the network monitor would be the same).

With respect to claims 15, 21, 54, and 60, Pruthi et al. discloses the measurement engine, processor and query engine 316, measuring congestion index values, one-way delay statistics, which are a type of measurement value (See page 2 paragraph 33 of Pruthi et al. for reference to measuring statistics of a network including one-way delay statistics). Pruthi et al. also discloses the management control, user interface 324, detecting variances in the congestion index, one-way delay statistic, over time and identifying the problem based on variances in the congestion index, one-way delay statistics (See page 5 paragraphs 53-54 of Pruthi et al. for reference to identifying asymmetries in a network based on the one-way delay statistic, meaning the asymmetries are based on differences in the one-way delay statistics on either side of the network monitor).

With respect to claims 16, 22, 55, and 61, Pruthi et al. discloses the measurement engine, processor and query engine 316, measuring congestion index

values, one-way delay statistics, which are a type of measurement value (**See page 2 paragraph 33 of Pruthi et al. for reference to measuring statistics of a network including one-way delay statistics**). Pruthi et al. also discloses the management control, user interface 324, detecting variances in the congestion index, one-way delay statistic, over time between different types of traffic and identifying the problem based on variances in the congestion index, one-way delay statistics (**See page 3 paragraph 37 of Pruthi et al. for reference to determining the types of packets and filtering packets based on their types before processing the packets to gain performance statistics and See page 5 paragraphs 53-54 of Pruthi et al. for reference to identifying asymmetries in a network based on the one-way delay statistic, meaning the asymmetries are based on differences in the one-way delay statistics on either side of the network monitor for different types of traffic**).

With respect to claims 17 and 56, for reference to management control, user interface 324, comparing measurement values, statistics over time (**See page 4 paragraph 50 of Pruthi et al. for reference to comparing statistics over time by recursively collecting and analyzing data be generating statistics based on previously generated statistics**).

With respect to claims 23 and 62, Pruthi et al. discloses the measurement engine, processor and query engine 316, characterizing performance of the network application using one or more metrics (**See page 2 paragraph 33 of Pruthi et al. for reference to using generating statistics to monitor application layer traffic**).

With respect to claims 24 and 63, Pruthi et al. discloses the metrics comprising a delay metric, roundtrip delay statistic, characterizing delay associated with end-to-end traffic in the network **(See page 2 paragraph 33 of Pruthi et al. for reference to statistics including a roundtrip delay statistic).**

With respect to claims 25 and 64, Pruthi et al. discloses the metrics comprising a server delay metric, response time statistic, characterizing delay of a server in responding to a request associated with the network application **(See page 2 paragraph 33 of Pruthi et al. for reference to the response time statistic).**

With respect to claims 26 and 65, Pruthi et al. discloses the metrics, statistics, comprising packet counts and data rates **(See page 9 paragraph 103 of Pruthi et al. for reference to statistics including byte/packet counts and bit/packet rates).**

With respect to claims 28 and 67, Pruthi et al. discloses the measurement engine, processor and query engine 316, monitoring the customer and provider network delays, one-way or roundtrip delays **(See page 2 paragraph 33 of Pruthi et al. for reference for monitoring networks and creating statistics including one-way or roundtrip delays).**

With respect to claims 29 and 68, Pruthi et al discloses the monitoring the customer and provider network delays as half round trip delays **(See page 2 paragraph 33 of Pruthi et al. for reference to monitoring networks and creating statistics including one-way delays, which are half round trip delays).**

With respect to claims 30 and 69, Pruthi et al. discloses the network device, network monitor 102, monitoring inbound and outbound delays on both the customer

and provider networks (**See page 2 paragraph 33 of Pruthi et al. for reference to monitoring networks for statistics including one-way delays**). Pruthi et al. also discloses monitoring for host latency, response time, associated with operation of the network application (**See page 2 paragraph 33 of Pruthi et al. for reference to monitoring networks for statistics including response time, which is a measure of host latency**). Pruthi et al. further discloses combining the results of monitoring to create an indication of the delay associated with using the network application (**See page 5 paragraph 53-54 of Pruthi et al. for reference to using one-way delays to identify asymmetries in the networks on either side of the network monitor, with the asymmetries and response times being an indication of delays associated with using the network application**).

With respect to claim 35, Pruthi et al. discloses the provider using data collected, metrics, at the demarcation point to indicate to a user a need for an additional resource (**See page 11 paragraph 133 of Pruthi et al. for reference to providers using metrics to notify clients that they need more bandwidth or additional server capacity**).

With respect to claim 36, Pruthi et al. discloses that the additional resource comprises additional bandwidth (**See page 11 paragraph 133 of Pruthi et al. for reference to providers using metrics to notify clients that they need more bandwidth**).

With respect to claim 37, Pruthi et al. discloses that the additional resource comprises additional server capacity (**See page 11 paragraph 133 of Pruthi et al. for**

reference to providers using metrics to identify bad servers and notify the need for additional server capacity and bandwidth).

With respect to claim 38, Pruthi et al. discloses the provider using data collected at the demarcation point to identify a service to offer a customer (See page 11 paragraph 133 of Pruthi et al. for reference to providers using metrics to notify the customer that they may want to buy more bandwidth).

With respect to claim 40, Pruthi et al. discloses the measurement engine, processor and query engine 316, performing measurements with respect to end-to-end delays (See page 2 paragraph 33 of Pruthi et al. for reference to statistics, which are taking by the processor and query engine 316, including roundtrip delay).

With respect to claims 41, 72, 73, and 74, Pruthi et al. discloses the management control, user interface 324, notifying the service provider about the problem and sending an event to address, fix, and alleviate the problem (See page 10 paragraphs 132-133 of Pruthi et al. for reference to notifying a provider about a problem and sending an event to a network management system for immediate action to fix the problem).

With respect to claims 70 and 77, Pruthi et al. discloses a classification engine, which is part of the processor and query engine 316, to classify traffic in a traffic flow on the network (See page 3 paragraph 37 of Pruthi et al. for reference to filtering packets based on the type of each packet). Pruthi et al. also discloses a response time block, which is part of the processor and query engine 316, to monitor response time (See page 2 paragraph 33 of Pruthi et al. for reference to processor and

query engine 316 creating statistics including a response time statistic). Pruthi et al. further discloses a shaping block, which is a part of the processor and query engine 316 to shape traffic (**See page 5 paragraph 53 of Pruthi et al. for reference to using statistics to shape traffic by dynamically routing communications**). Pruthi et al. also discloses the measurement engine, processor and query engine 316, communicatively coupled to the classification engine, the response time engine, and the shaping block to obtain information to create measurements. These blocks are inherently coupled in the apparatus of Pruthi et al. because they are all embodied in the same processor and query engine 316.

With respect to claims 75 and 76, Pruthi et al. discloses shaping traffic in response to the event by controlling non-essential traffic (**See page 3 paragraph 37 of Pruthi et al. for reference to dynamically shaping traffic in response to the statistics by adjusting network routing, which inherently means controlling all traffic including non-essential traffic**).

With respect to claim 79, Pruthi et al. discloses the service provider allocating additional bandwidth in response to the notification of the problem (**See page 5 paragraph 53 of Pruthi et al. for reference to dynamically changing bandwidth, which includes allocating additional bandwidth, based on the statistics generated by the network monitor**).

With respect to claims 83 and 84, Pruthi discloses the network architecture further comprising a customer data center coupled to a network device via a local area network (**See page 1 paragraph 3 page 2 paragraph 32 and Figure 1 of Pruthi et al.**

for reference to a computer C1, which is a customer data center, coupled to a network device via an Ethernet network N1 and for reference to the networks monitored in this system being LANs).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruthi et al. in view of Drysdale et al. (U.S. Pat. 6058102).

With respect to claims 27 and 66, Pruthi et al. does not disclose the one or more metrics comprising frame relay counts.

Drysdale et al., in the field of communications, discloses a frame relay count in a system for performing service level analysis (See column 11 lines 47-67 of Drysdale et al. for reference to counting frames relays for using in determining data delivery ratios). Providing a frame relay count has the advantage of allowing a more detailed set of statistics to be generated by a network monitor.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Drysdale et al., to combine providing a frame relay count, as suggested by Drysdale et al., with the network monitor method

and apparatus of Pruthi et al., with the motivation being to allow a more detailed set of statistics to be generated by a network monitor.

6. Claims 32 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruthi et al. in view of Bowman-Amuah (U.S. Pat. 6556659).

With respect to claims 32 and 78, Pruthi et al. does not disclose monitoring compliance with the service-level agreement, sending an event to the network device for notification of a problem, and sending a notification if the service-level agreement is being violated.

Bowman-Amuah, in the field of communications, discloses monitoring compliance with the service-level agreement, sending an event to the network device for notification of a problem, and sending a notification if the service-level agreement is being violated (See column 23 lines 6-35 of Bowman-Amuah for reference to monitoring whether service levels are being met and sending an event to alert the customer when the service levels are being violated). Monitoring for and alerting customers about service level agreement compliance has the advantage of allowing a customer to make sure that they are receiving all the services they are paying for.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Bowman-Amuah, to combine monitoring and alerting customers about service level agreement compliance, as suggested by Bowman-Amuah, with the network monitoring method and apparatus of Pruthi et al.,

with the motivation being to allow a customer to make sure that they are receiving all the services they are paying for.

7. Claims 42 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruthi et al. in view of Fletcher et al. (U.S. Pat. 6321264).

With respect to claims 42 and 80, Pruthi et al. does not disclose recording times associated with encountering packets and acknowledgment of the packets to generate a measurement value.

Fletcher et al., in the filed of communications, discloses recording times associated with encountering packets and acknowledgment of the packets to generate a measurement value (See the abstract and claim 5 of Fletcher et al. for reference to recording time when a packet is first sent, recording times of a second packet that is an acknowledgment of the first packet, and using the times to generate a performance statistic, which is a measurement value). Recording the times of a packet and a corresponding acknowledgment packet has the advantage of providing measurements, which may be used to determine the time it takes a packet traverse the network and then be acknowledged.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Fletch et al., to combine recording the times of a packet and a corresponding acknowledgment packet, as suggested by Fletcher et al., with the network monitoring method and apparatus of Pruthi et al., with the

motivation being to provide measurements, which may be used to determine the time it takes a packet traverse the network and then be acknowledged.

8. Claims 81 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruthi et al. in view of Brailean et al. (U.S. Pat. 6134237).

With respect to claims 81 and 82, Pruthi et al. does not disclose recording the sequence number of each of the packets at the demarcation point.

Brailean et al., in the field of communications, discloses recording the sequence number of each of the packets at the demarcation point (See column 6 lines 33-51 of Brailean et al. for reference to recording the sequence number of a packet at a network monitor, and using this number to determine if a communication error has occurred). Recording the sequence number of a packet has the advantage of allowing a network monitor to check for communications errors by matching recorded sequence numbers of packets to sequence numbers in received acknowledgment packets (See column 6 lines 33-51 of Brailean et al. for reference to this process).

IT would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Brailean et al., to combine recording packet sequence numbers, as suggested by Brailean et al., with the network monitoring method and apparatus of Pruthi et al., with the motivation being to allow a network monitor to check for communications errors by matching recorded sequence numbers of packets to sequence numbers in received acknowledgment packets.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (703) 305-8702. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703) 305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jem


RICKY NGO
PRIMARY EXAMINER